

Lesson 7.4 • Function Notation

Name _____ Period _____ Date _____

1. Find each unknown function value or x -value for $f(x) = 4x - 7$ and $g(x) = -3x + 5$ without using your calculator. Then enter the equation for $f(x)$ into Y1 and the equation for $g(x)$ into Y2. Use function notation on your calculator to check your answers.

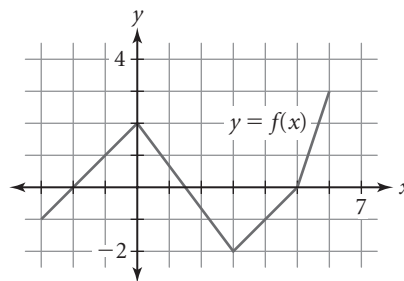
a. $f(2)$	b. $f(0)$	c. $f(-3)$	d. x , when $f(x) = -3$
e. $g(6)$	f. $g(-7)$	g. $g(0.5)$	h. x , when $g(x) = 5$
i. $f(3.25)$	j. $g\left(\frac{2}{3}\right)$	k. x , when $f(x) = -\frac{13}{3}$	l. x , when $g(x) = 11.9$

2. Find the y -coordinate corresponding to each x -coordinate or vice versa for the functions $f(x) = 2x^2 - 4x - 5$ and $g(x) = 40(1 - 0.2)^x$. Check your answers with your calculator.

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|--------------|------------|------------|---------------------------|
| a. $f(1)$ | b. $f(-3)$ | c. $f(0)$ | d. $f(2)$ |
| e. $f(-0.5)$ | f. $g(1)$ | g. $g(-1)$ | h. x , when $g(x) = 40$ |

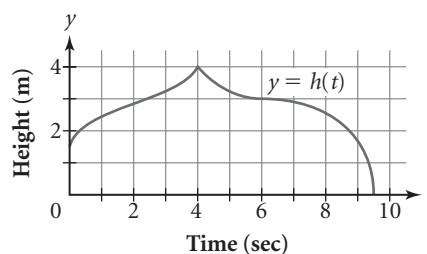
3. Use the graph of $y = f(x)$ to answer each question.

- a. What is the value of $f(0)$?
- b. What is the value of $f(3)$?
- c. For what x -value or x -values does $f(x)$ equal 3?
- d. For what x -value or x -values does $f(x)$ equal 0?
- e. What are the domain and range shown on the graph?



4. The graph of the function $y = h(t)$ shows the height of a paper airplane on its maiden voyage.

- a. What are the dependent and independent variables?
- b. What are the domain and range shown on the graph?
- c. Use function notation to represent the plane's height after 6 seconds.
- d. Use function notation to represent the time at which the plane was 4 meters high.



5. The function $f(x) = 2.5x + 1.5$ represents the distance of a motorized toy car from a motion sensor, where distance is measured in meters and time (x) is measured in seconds.

- a. Find $f(3)$. Explain what this means.
- b. How far is the car from the sensor at time 0? Express your answer using function notation.
- c. When will the car be 12.5 meters from the sensor? Express your answer using function notation.